

Securing the U.S. Aerospace and Defense Critical Minerals Supply Chain

AIA Recommends: A comprehensive approach to critical minerals sourcing that is rooted in the current dynamics of the critical minerals market, includes targeted investments in U.S. supply chains, and expands engagement with allies and partners.

The race for technological supremacy has rapidly increased demand for critical minerals and elevated market access as a top national security priority. Volatile and non-transparent global markets, uneven concentrations of geologic sources, foreign ownership concerns, and environmental, energy, and labor-intensive production processes continue to stress supply chains and encumber American industry access to these key materials.

Rare earths, cobalt, and manganese metal, among others, are used in the production of high-end, cutting-edge commercial and defense technologies, ranging from engines to microelectronics to castings and forgings. Secure access to these resources is vital as the security environment demands the modernization of defense capabilities. Given the shared supply chain between commercial and defense industries, recent disruptions to the commercial aviation market have had downstream effects on the defense operations of many AIA members. Legislative and regulatory restrictions on the sourcing of critical minerals are under consideration, and such policies must accurately reflect the realities of today's global markets. Recognizing the following priorities is key to maintaining proper supply chains and access:

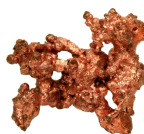
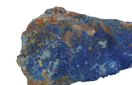
- 1. Aerospace and defense (A&D) supply chains are unique** since they require high-purity aerospace-grade materials purchased in smaller quantities than typical industrial applications;
- 2. Critical minerals are a national security priority**, as outlined in Executive Order 14017 'America's Supply Chains;'
- 3. Global partnerships** like the U.S. - Japan Critical Minerals agreement **drive policy priorities**; and
- 4. Incentives are required to ensure reliable domestic access.**

Aerospace and Defense Critical Minerals and U.S. Net Import Reliance



Arsenic Metal: 100% net import reliant. Used in semiconductors.

Cobalt: 76% net import reliant. Used in jet engines and electronic batteries.



Copper: 48% net import reliant. Used as an alloying element.

Gallium: 100% net import reliant. Used in semiconductor chips, radars, sensors, and secure communications.



Germanium: Over 50% net import reliant. Used in electronics and solar applications, fiber optic systems, infrared optics, and polymerization catalysts.

Hafnium: Used in aerospace alloys.



Magnesium: Over 50% net import reliant. Used in castings.

Molybdenum: Over 90% net import reliant. Used in castings.



Scandium: 100% net import reliant. Used in aluminum-scandium alloys, electronics, lasers, and radioactive isotopes.

Tantalum: 100% net import reliant. Used in aerospace alloys and jet engines.



Titanium Sponge: 100% net import reliant. Used in aerospace alloys.

Tungsten: Over 50% net import reliant. Used in high-density aerospace alloys and helicopter blades.



Key Actions:

- ▶ **Revitalize the National Defense Stockpile (NDS).** Congress should appropriate funds in line with the full \$1 billion in authority for appropriations to revitalize the National Defense Stockpile Transaction Fund (“the Fund”) that was included in the FY23 National Defense Authorization Act. The Fund has existing authority to pay for recycling initiatives from military surplus, fund studies and qualification of domestic sources, and loan material, among other statutory responsibilities.
- ▶ **Invest in Infrastructure.** Congress and the Administration should consider providing incentives to restart domestic production and investment in new infrastructure development that will increase capacity. Increasing domestic mining and refinery of minerals critical to the A&D industry should also be encouraged.
- ▶ **Department of Defense and Department of Energy Investment.** The Administration should use all available funding tools to support development of domestic critical minerals projects. Qualification of domestic suppliers of key critical minerals used in high-purity A&D applications should be done to encourage new ore refinement, re-use, and recycling.
- ▶ **International Engagement.** Congress and the Administration should remove barriers to trade, including tariffs on critical minerals utilized in A&D supply chains, with allies and key trading partners. The U.S. government should also use initiatives like the Mineral Security Partnership to bolster development, exploration, and refinement within those supply chains.
- ▶ **Issue Section 45x(c)(6) Guidance.** The U.S. Department of the Treasury should promptly issue guidance for Section 45x(c)(6) of the Inflation Reduction Act, which provides a 10 percent tax credit for applicable critical minerals. Treasury should solicit input from industry once guidance is released and establish a clear process to expand the minerals list and eligibility criteria.
- ▶ **Permitting Reform.** Congress should pass permitting reform legislation that streamlines approval timelines for domestic critical minerals projects, which have historically lasted more than 10 years.
- ▶ **Metals Recycling Initiatives.** Creating local and national recycling incentives, such as recycling grants and an income tax credit for investments in recycling facilities, machinery, or equipment for the metal recycling process, should be considered for minerals deemed critical to the A&D sector.



Scan to read AIA's full 2023 Critical Minerals report.

About AIA | *For over 100 years, the American aerospace and defense industry has shaped the world around us – from the first flight, to the moon landing, and beyond. With more than 2.1 million employees and generating nearly \$400 billion in economic value each year, our industry is critical to the health of the U.S. economy, national security, and everyday life for every American. The Aerospace Industries Association (AIA) has been the voice of the industry since 1919 – advocating for the policy, investment, and regulatory framework that will protect our global leadership now and into the future.*